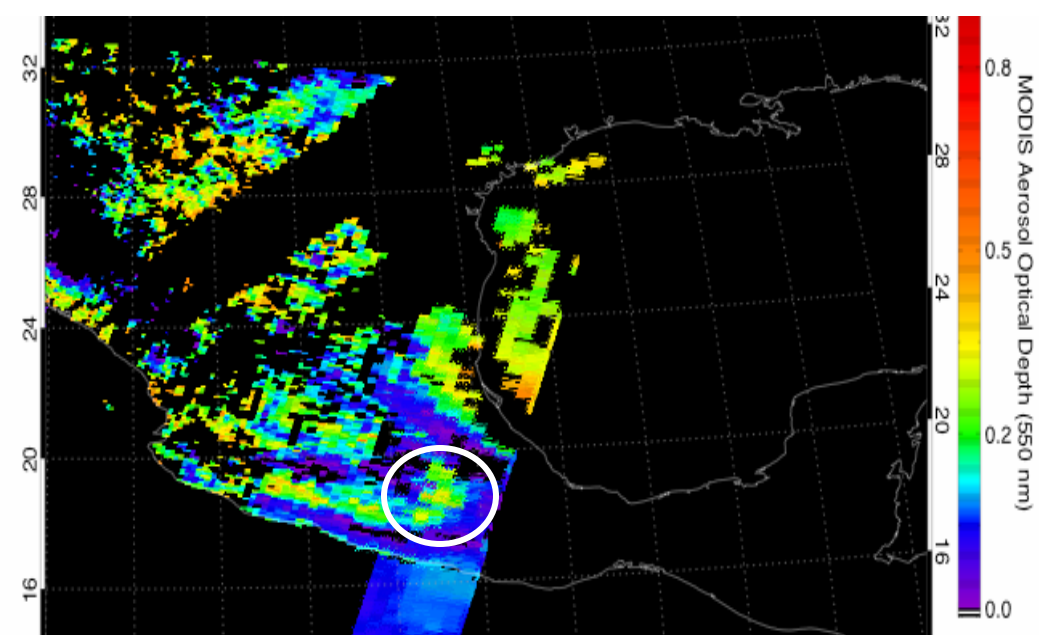


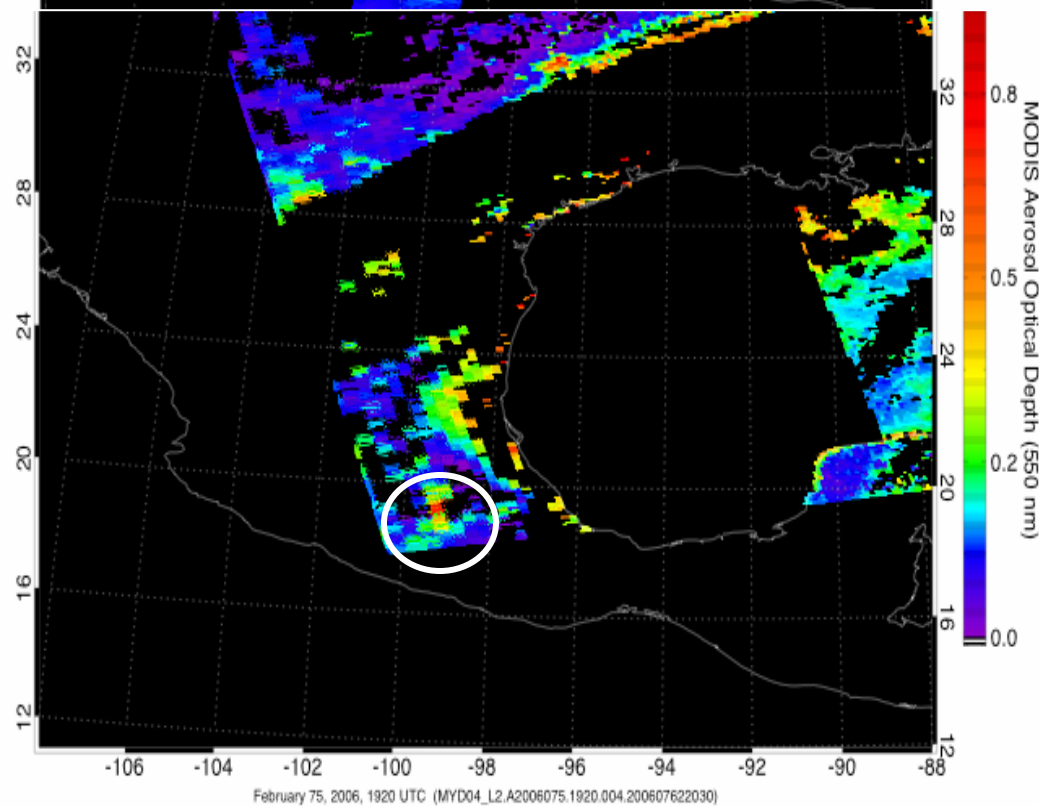
Terra MODIS
March 16, 2006

AOD ~ 0.2 -0.4

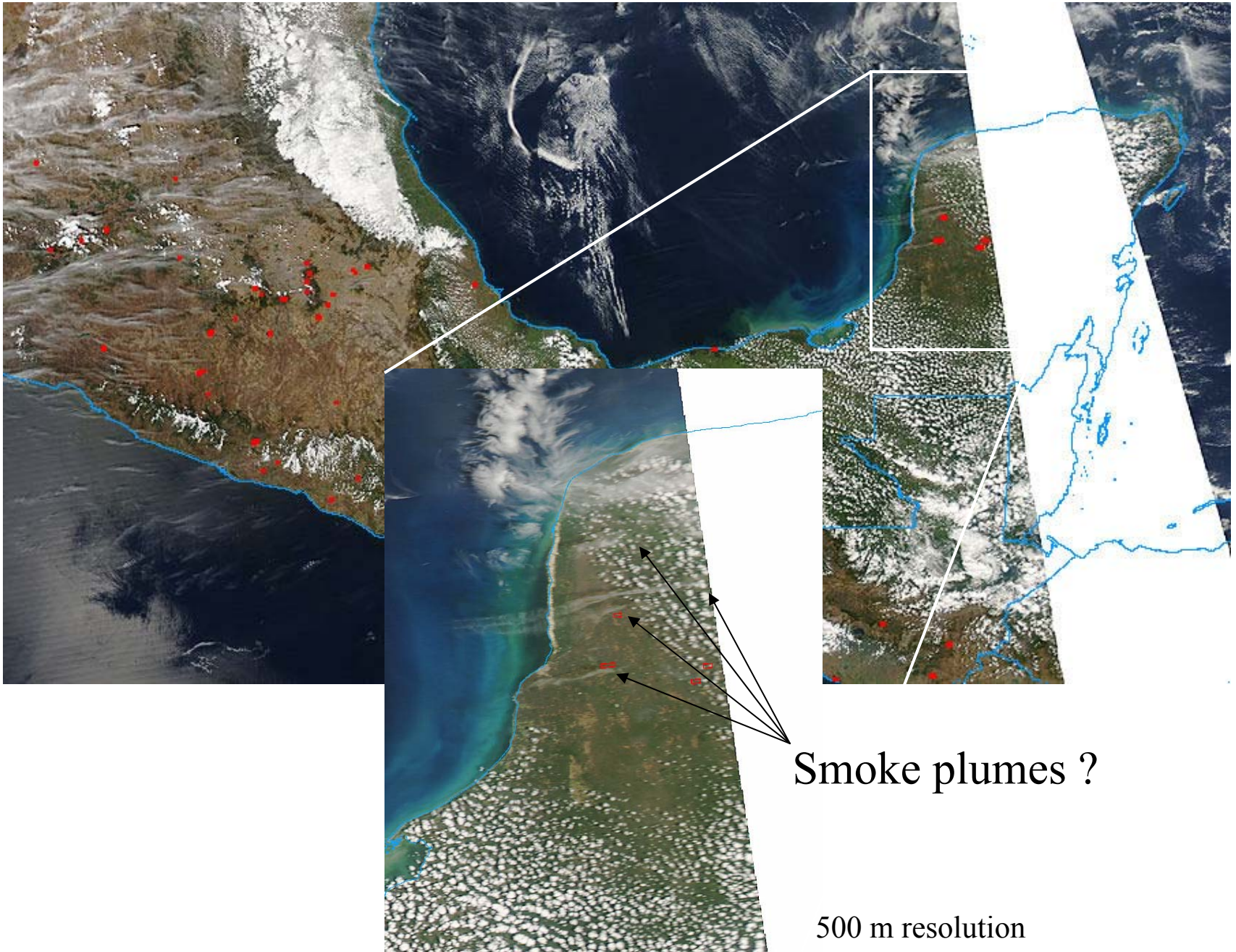


Aqua MODIS
March 16, 2006

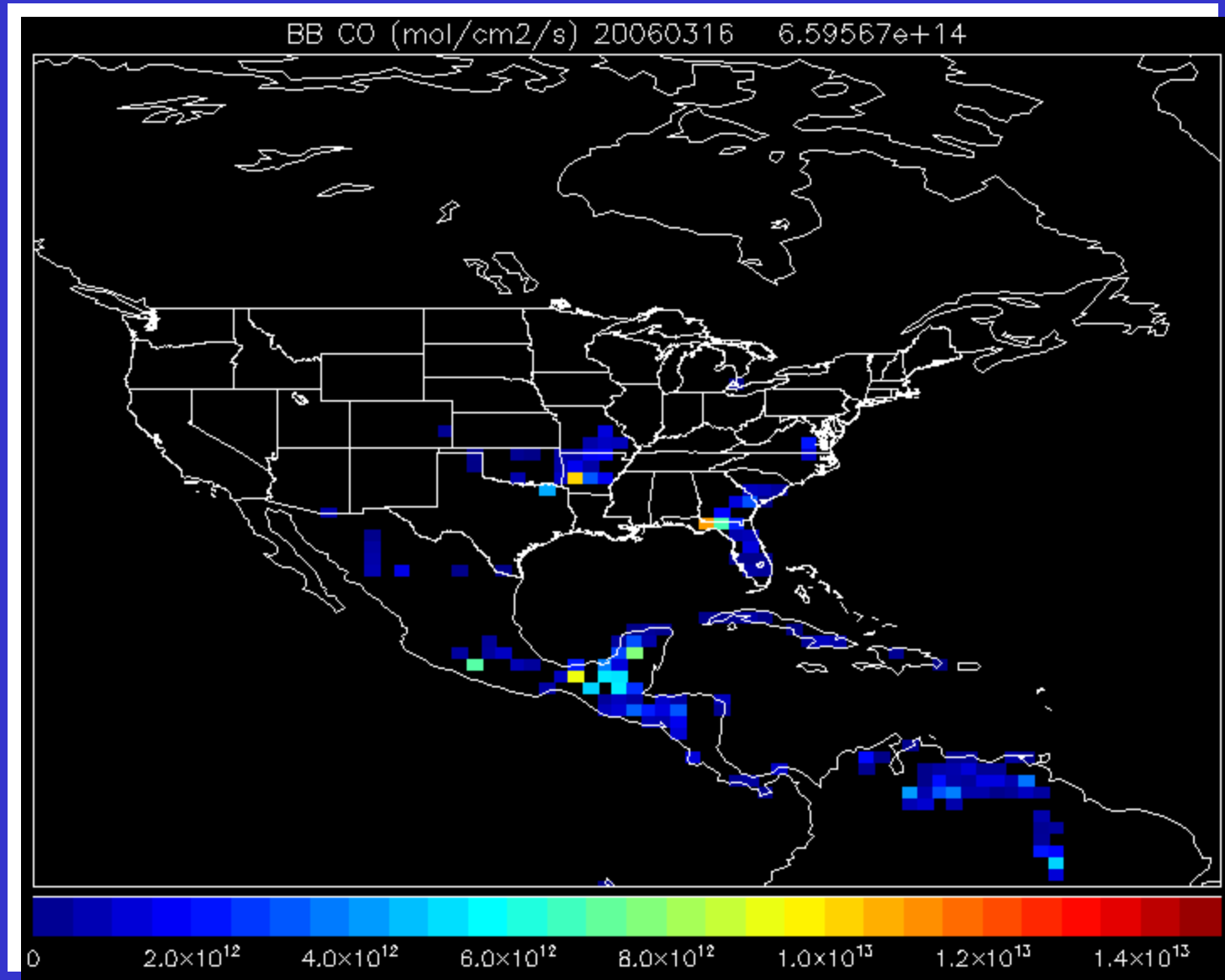
AOD ~ 0.4 -0.8



Aqua MODIS, March 17



RAQMS NRT Biomass Burning CO Emissions: Current FX Cycle

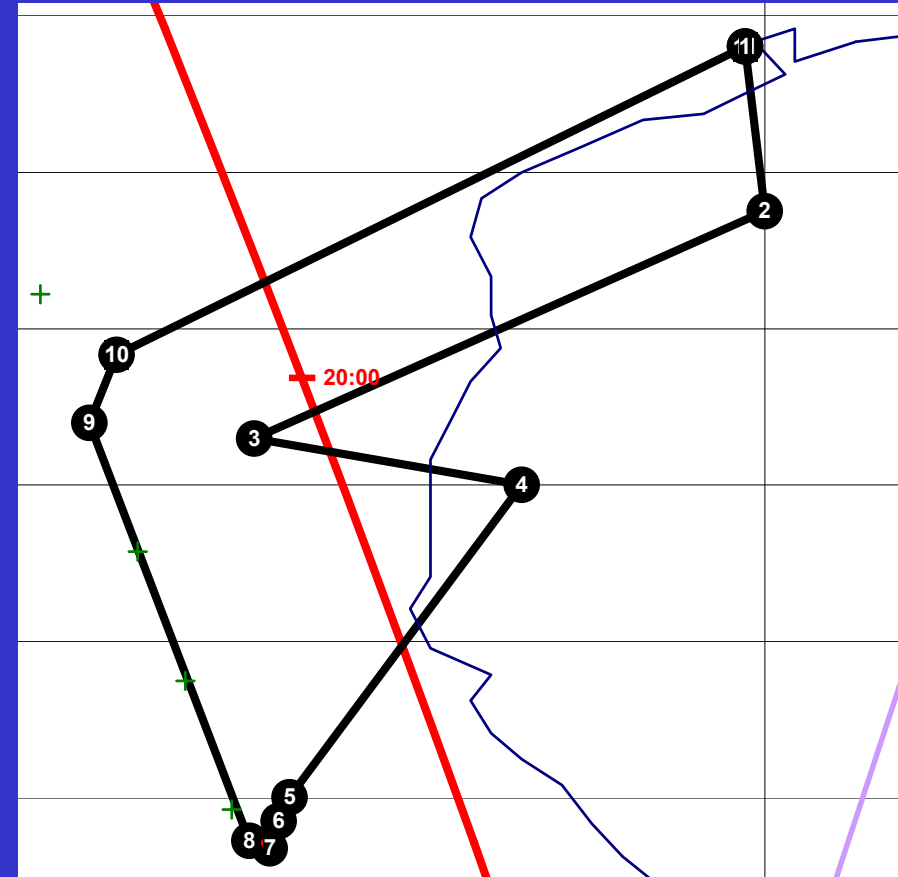


MODIS fire counts from 12Z 03/16 (Thur) -12Z 03/17 (Fri)

Plan for INTEx-B flight#8 – Houston local 6 on Sunday 3/19 updated 3/18 @18Z

Objectives:

- MC plume over northern Mexico and Gulf
- Coordinated spiral with J-31
- Intercomparison with C-130?
- MC low-altitude and spiral
- OMI & TES validation
- Monterrey missed approach

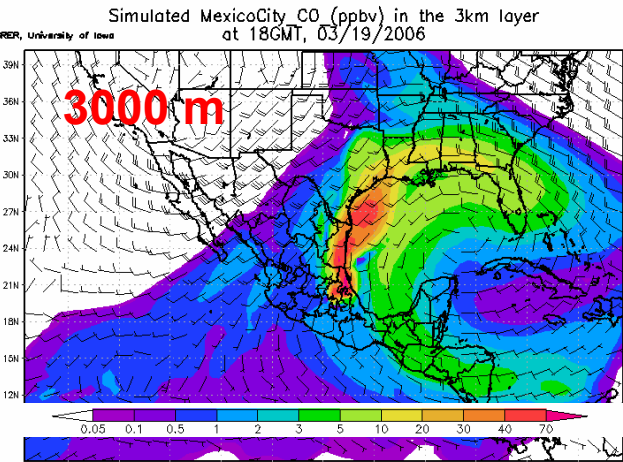
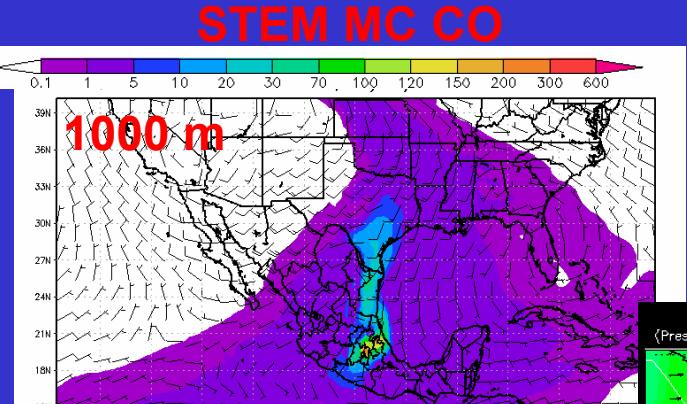
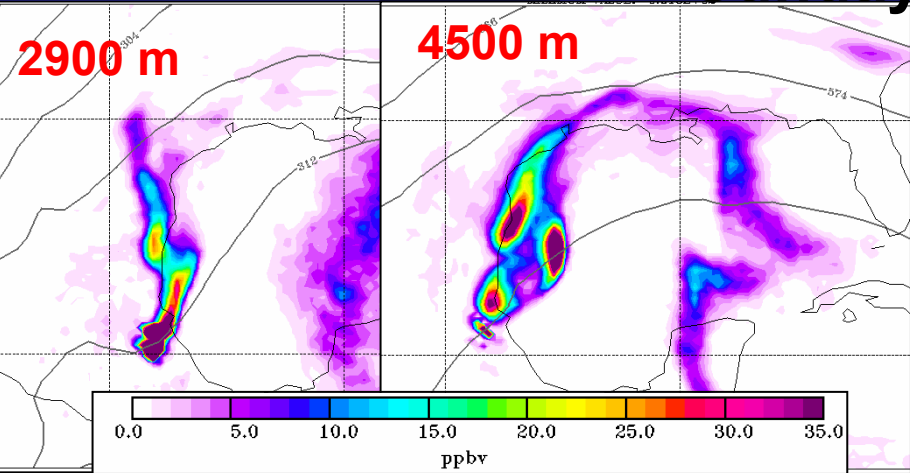


- Points 1-2: climb to 25K and spiral down into free tropospheric MC plume
- Points 2-3: free tropospheric MC plume
- Points 3-5: vertical profiling in low-altitude MC outflow, intercomp w/C-130
- Point 5 (T2): 15 → 1K spiral coordinated with J-31
- Points 5-8: MC missed approach and spiral up to 37K
- Points 8-9: TES+OMI validation track
- Point 10: Monterrey missed approach
- Points 10-11: Low-altitude vertical profiling

FLEXPART MC CO

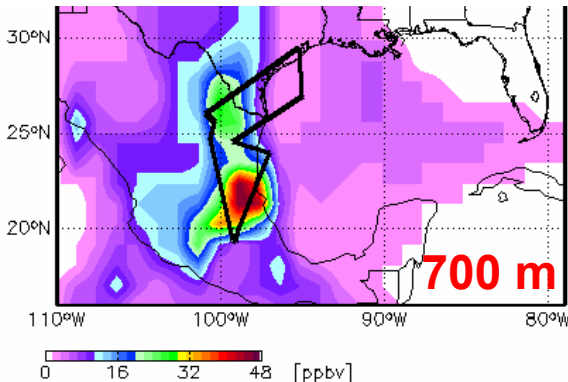
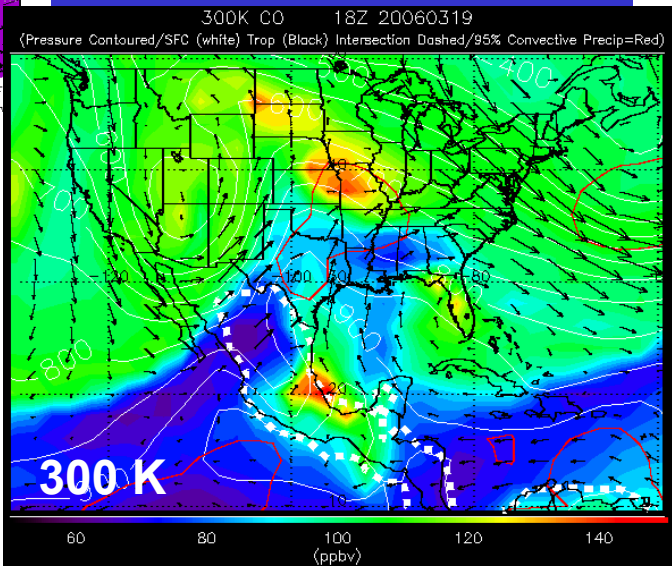
Sunday 3/19 18Z

GMAO C. American CO

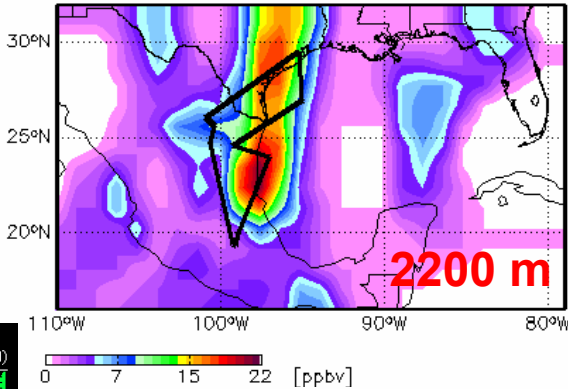


Where is the Mexican plume?

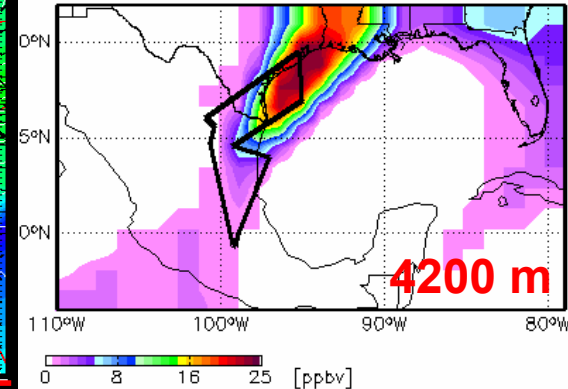
RAQMS CO



C. American FF CO 20060319 18 GMT at 790 hPa (2.2 km)

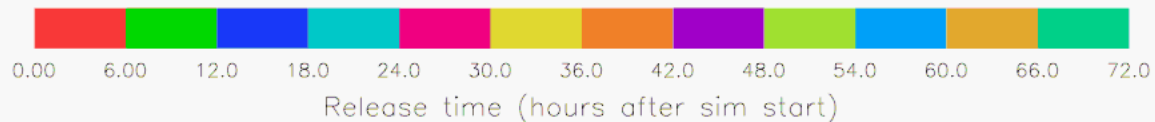
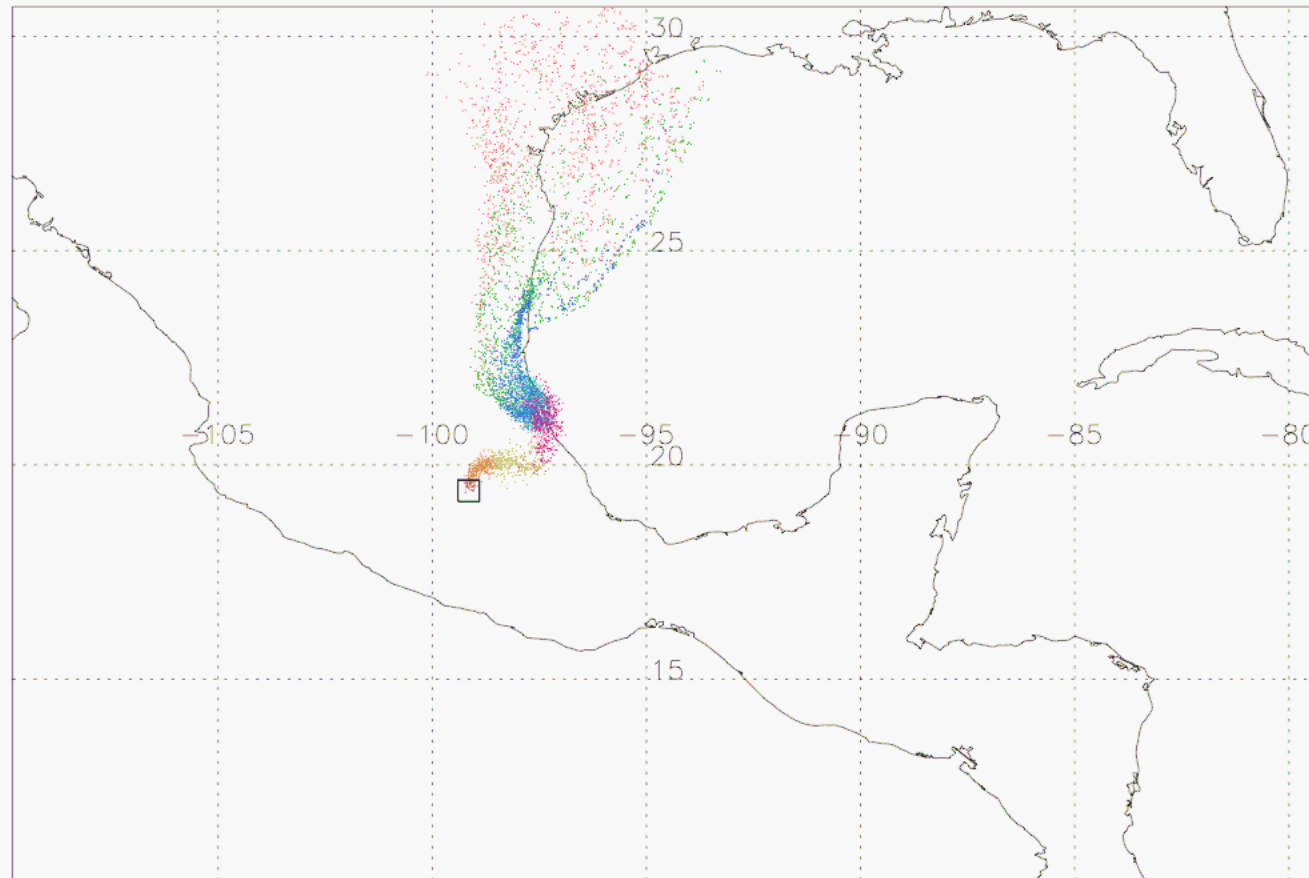


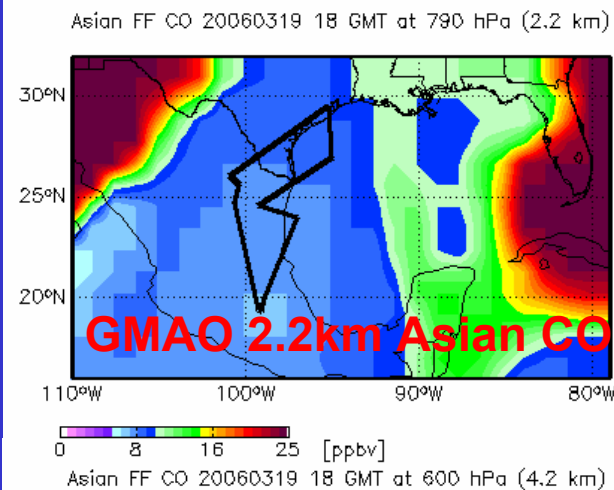
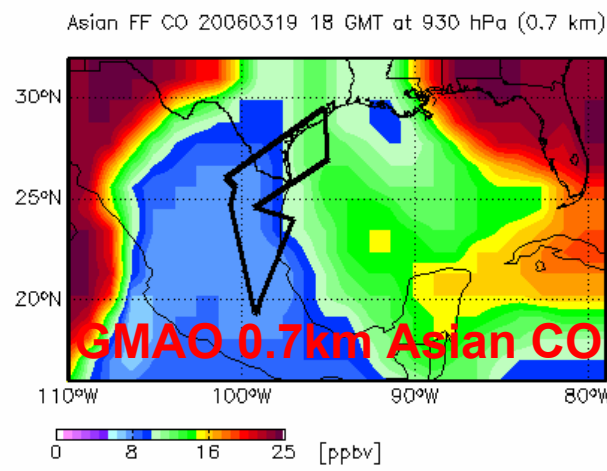
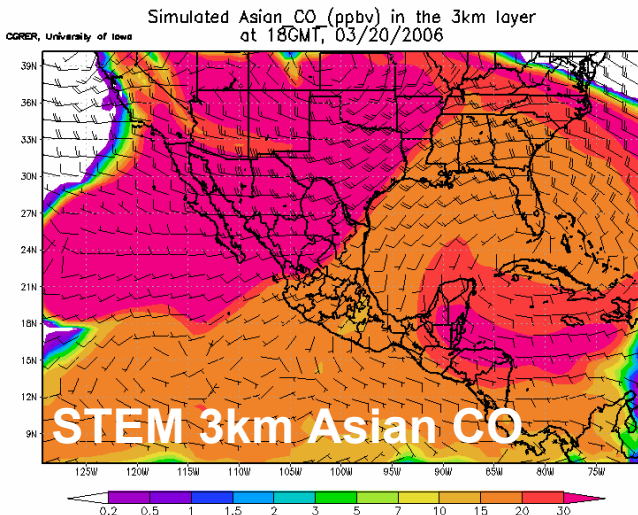
C. American FF CO 20060319 18 GMT at 600 hPa (4.2 km)



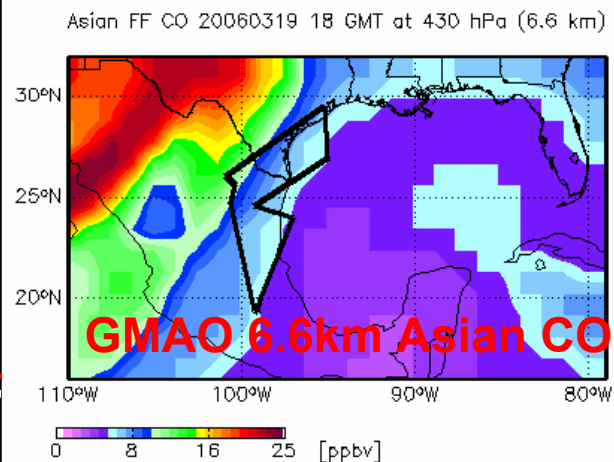
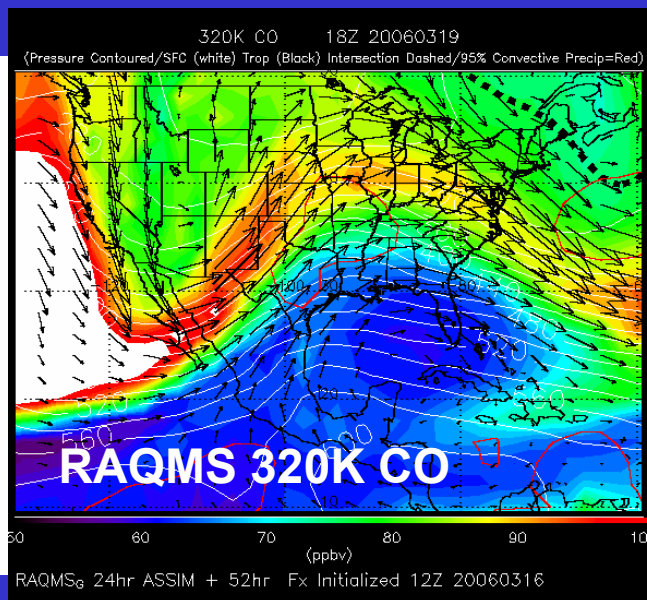
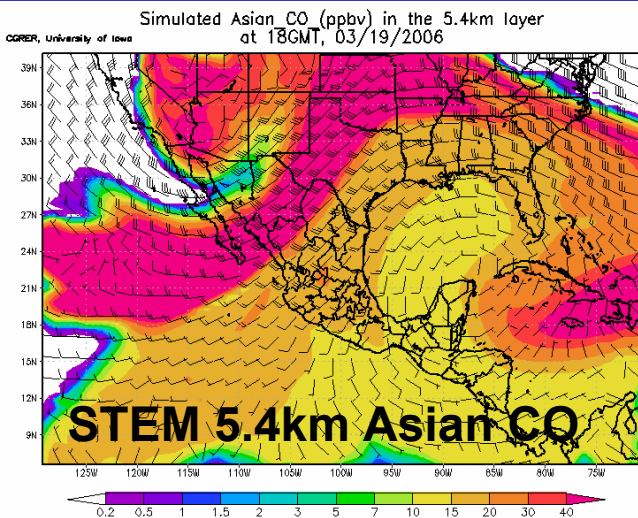
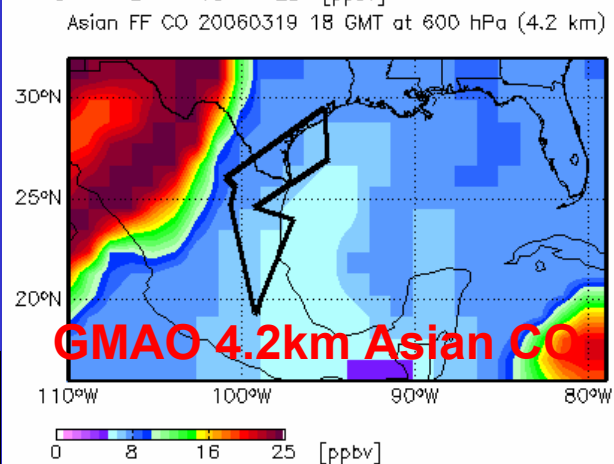
FLEXPART using CGRER Iowa winds suggests early-17th pollution over N. Mexico, Texas Coast

Particle positions at time 03191800
Flexpart sim start 03180000

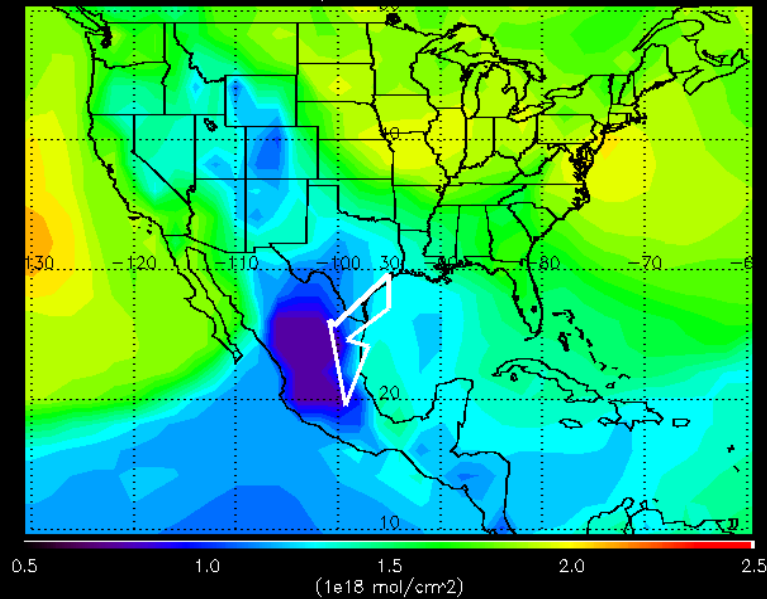




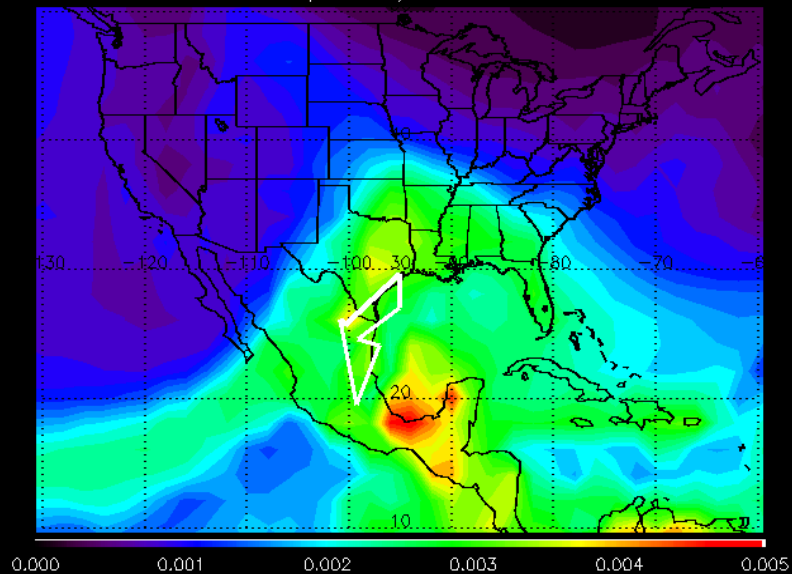
Where is the Asian plume?



RAQMS SFC-Trop CO Column18Z 20060319

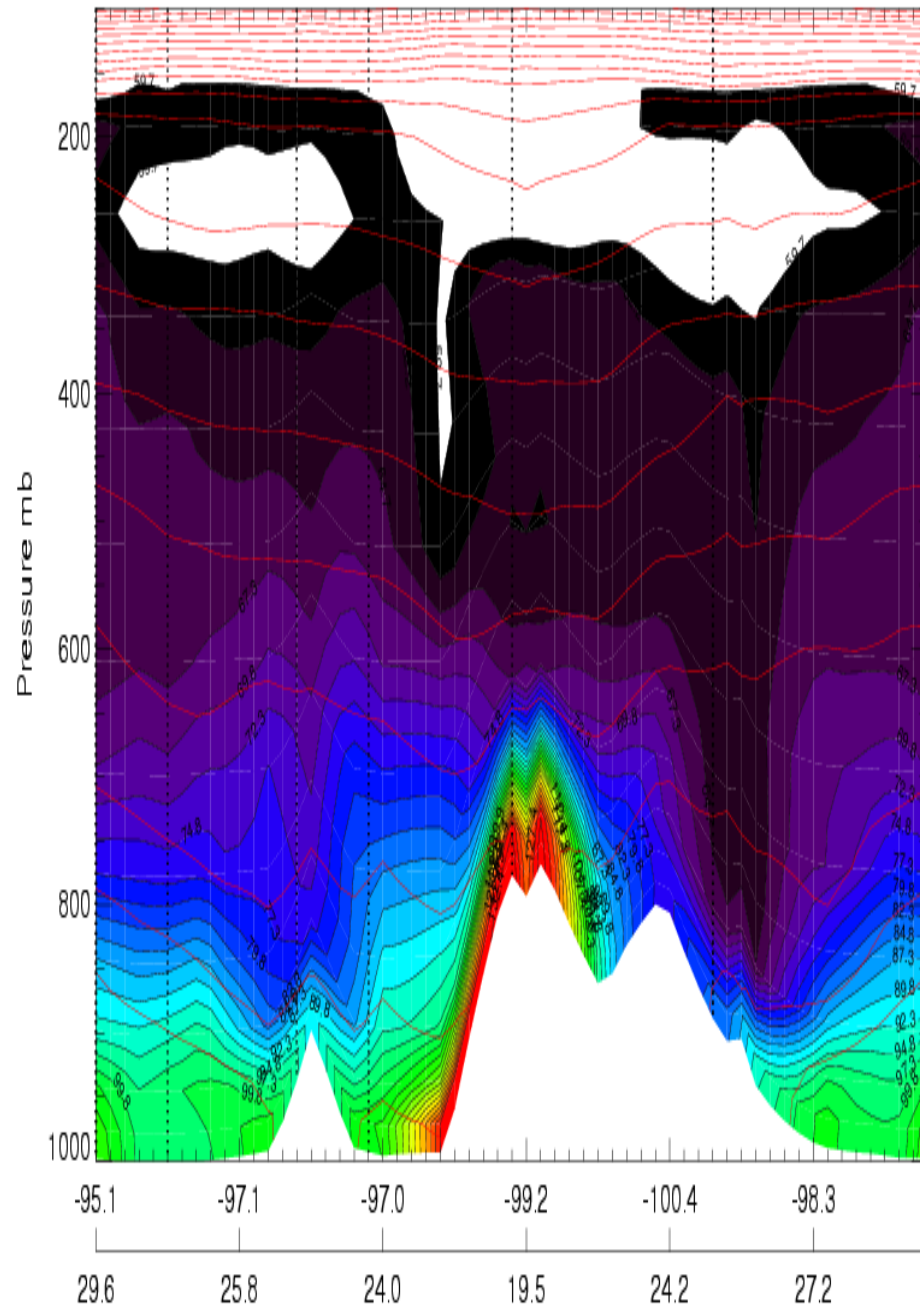


RAQMS SFC-Trop CH2O/CO Ratio18Z 20060319

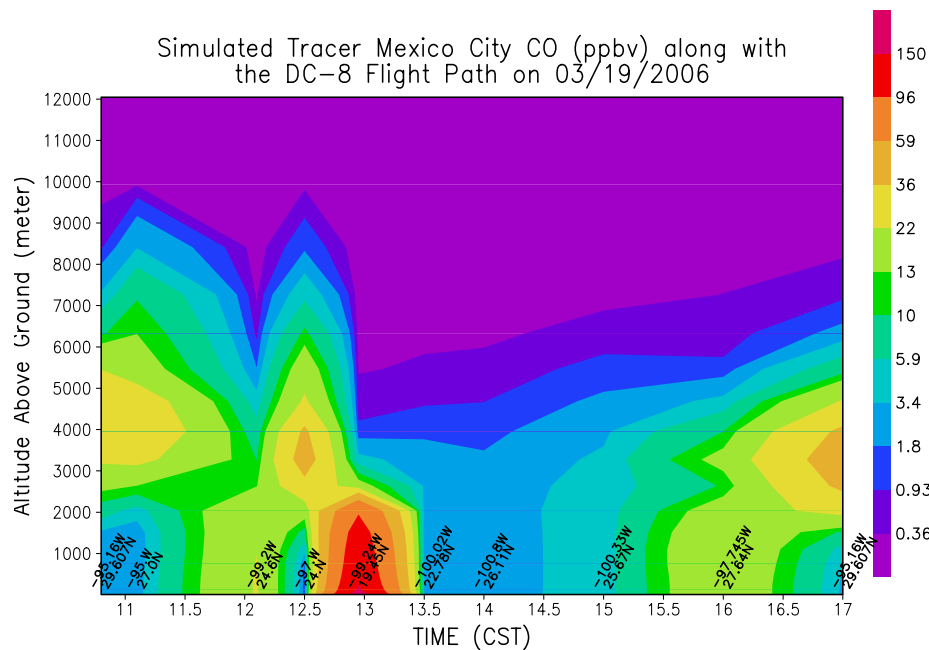


Current

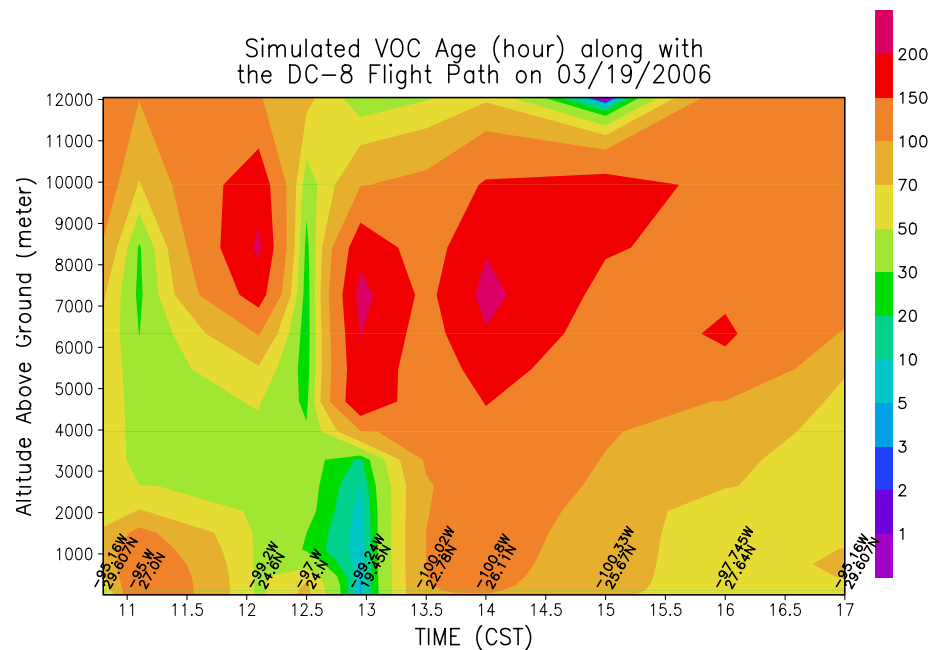
CO (ppb) Cl= 2.50595
RAQMS_20060319_18Z_54hr_fcst_curtain.dat



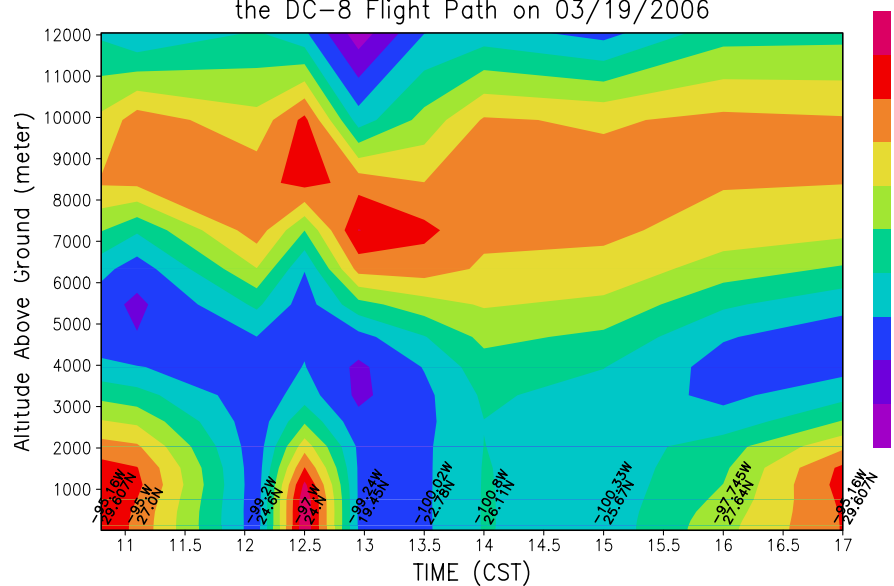
Simulated Tracer Mexico City CO (ppbv) along with the DC-8 Flight Path on 03/19/2006



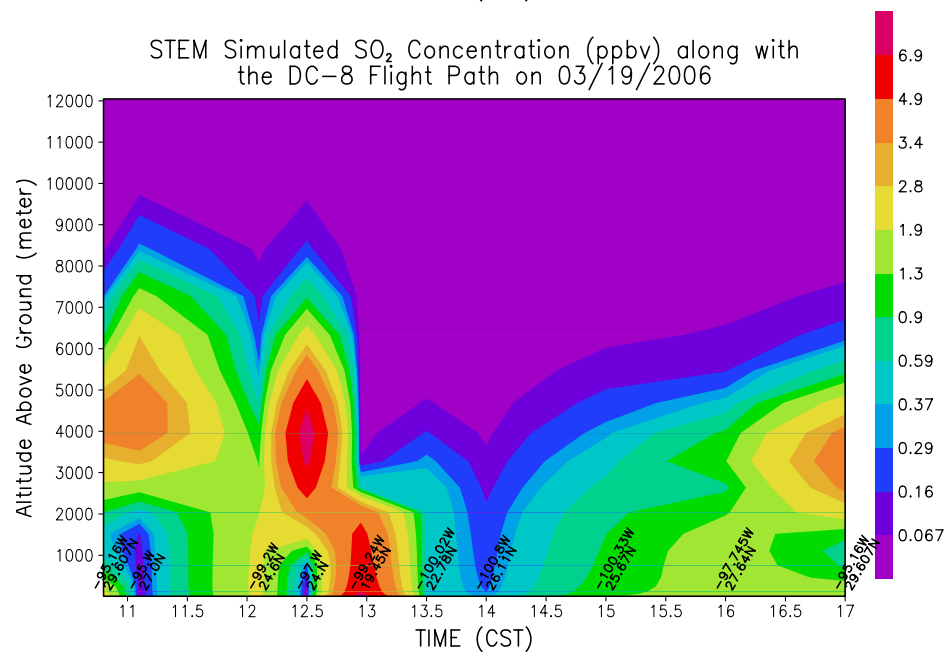
Simulated VOC Age (hour) along with the DC-8 Flight Path on 03/19/2006



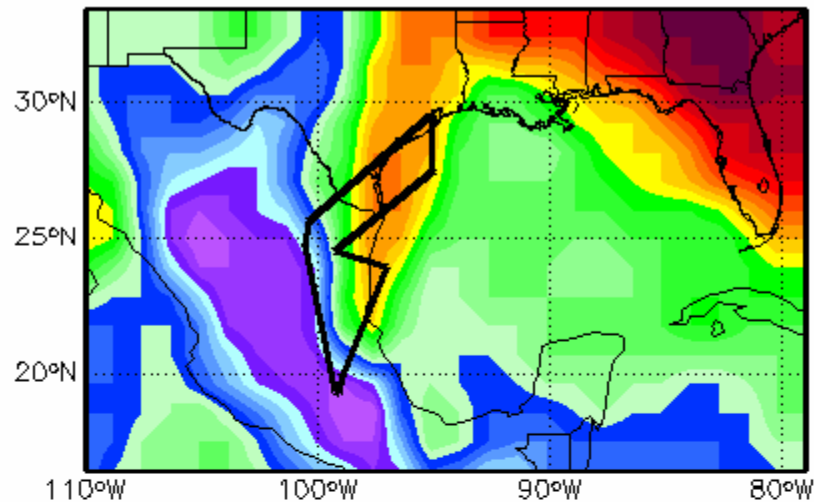
Simulated Tracer Asian CO (ppbv) along with the DC-8 Flight Path on 03/19/2006



STEM Simulated SO₂ Concentration (ppbv) along with the DC-8 Flight Path on 03/19/2006

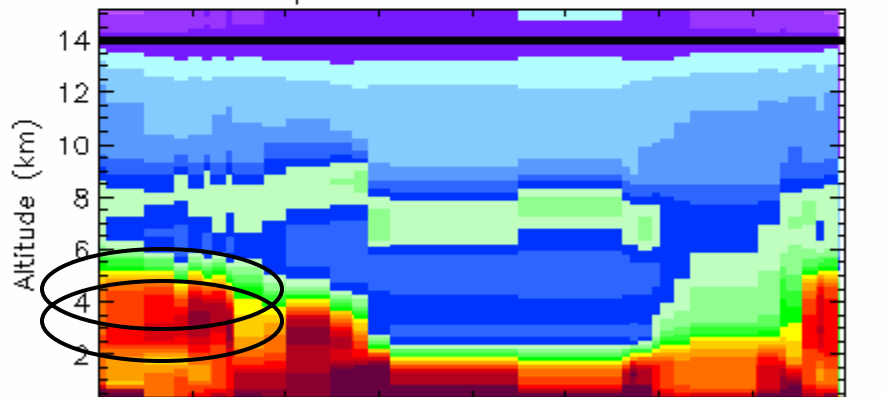


CO columns 20060319 18 GMT



0.70 1.00 1.30 1.60 [10^{18} molec/cm²]

Curtain plot – CO 20060319 18 GMT



29.6N 26.8N 24.3N 21.0N 19.7N 19.4N 22.1N 25.5N 29.6N
95.1W 96.1W 98.1W 98.4W 99.0W 99.1W 99.9W 100.4W 95.1W

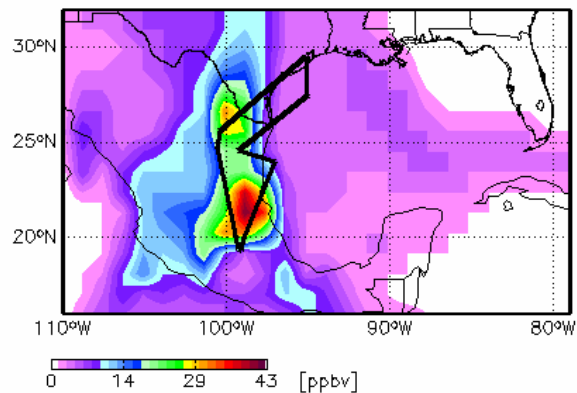
0 30 60 90 120 [ppbv]

GMAO forecast: 3/19 18Z

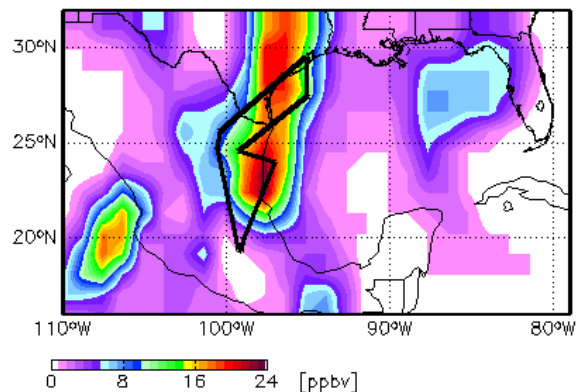
- Northerly Mexican outflow along coast
- Veering eastward with altitude
- Mixed with biomass burning emissions
- Maybe a bit of Asian inflow at NW part of the flight track

Forecast initialized 3/18 0Z

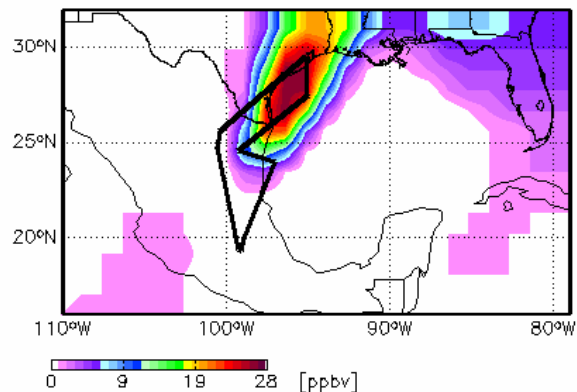
C. American FF CO 20060319 18 GMT at 930 hPa (0.7 km)



C. American FF CO 20060319 18 GMT at 790 hPa (2.2 km)



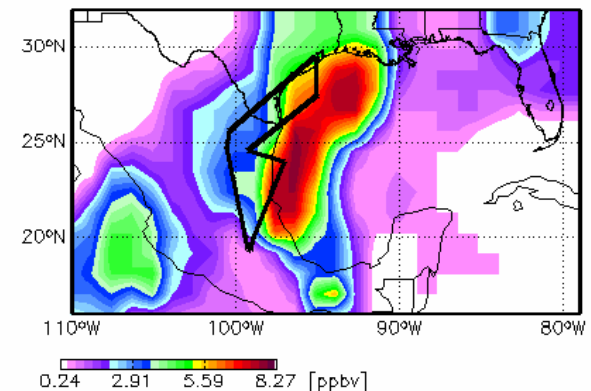
C. American FF CO 20060319 18 GMT at 600 hPa (4.2 km)



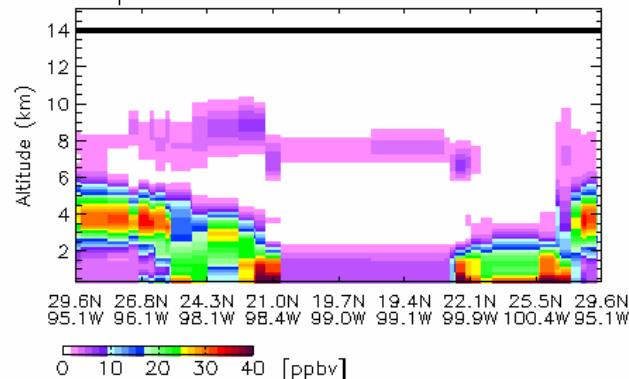
**Mexican plume
veers to East
with altitude**

**... mixed with biomass
burning emissions**

W. Hemisphere BB CO 20060319 18 GMT at 790 hPa (2.2 km)



Curtain plot – C. American FF CO 20060319 18 GMT



Curtain plot – W. Hemisphere BB CO 20060319 18 GMT

